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TI - DEVICE AND METHOD FOR DETECTING **CONTOUR** AND GENERATING KEY SIGNAL
IN - MITSUNAGA TOMOO; TOTSUKA TAKUSHI; YOKOYAMA MIGAKU

PA - SONY CORP

IC - H04N5/275 ; G06T9/20 ; H04N5/208

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TI - **Outline** extractor of key signal generator for special effects in TV programmes, movies - generates two **boundary** curves which depict approximate shape of **outline** of object, based on **boundary** co-ordinates generated by **boundary** co-ordinate extracting unit

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AB - J10164436 The **outline** extractor comprises an **outline** area determining unit (6) which estimates **outline** area of an object. A vector calculating unit (7) calculates the vector value of the estimated **outline** area.

- Based on the calculated vector value, the **boundary** co-ordinates along inner side and external side of the **outline** is extracted by a **boundary** co-ordinate extracting unit. A **boundary** curve generating unit generates two **boundary** curves which depict approximate shape of the **outline** of the object, based on the **boundary** co-ordinates generated.

- ADVANTAGE - Enables generation of key information accurately.

- (Dwg.1/21)

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TI - DEVICE AND METHOD FOR DETECTING **CONTOUR** AND GENERATING KEY SIGNAL

AB - PROBLEM TO BE SOLVED: To accurately generate key information by determining a **contour** area related to the **contour** of object, calculating a gradient vector and generating two inner and outer **boundary** curves along with a **contour** area **edge**.

- SOLUTION: Based on estimated **contour** information S2 from an estimated **contour** calculating part 5, a **contour** candidate area determining part 6 determines **contour** candidate area information s3 and inputs it to a gradient vector calculating part 7. Here, an **edge** strength image G is calculated and sent to a **contour** path search part 8 and a **contour** extracting part 9. The search part 8 sends a **contour** coordinate list D of pixels which passed through the center of **contour** to a curve generating part 10, and at this part 10, **contour** curve information C is prepared and sent to the **contour** extracting part 9. On the other hand, a motion vector estimating part 11 estimates movement from information C of the current image and preceding image and feeds it back to the determining part 6. Based on the image G and the information C, the **contour** extracting part 9 generates two **boundary** curves surrounding an area corresponding to the **contour** of the object and sends them to a **soft** key generating part 3.



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